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IN THE CLAIMS:

Claim 1 (Original) A method for improving the signal to noise ratio in a multicarrier communication system, the method comprising:

receiving a plurality of frequency domain data signals;

accumulating the plurality of signal data on a predetermined number of useful subcarriers;

averaging the accumulated signal data; and

substituting the averaged accumulated data for the received frequency domain data signals to improve the signal to noise ratio.

Claim 2 (Original) The method of claim 1 further comprising compensating for channel distortion using a per-tone frequency domain equalizer.

Claim 3 (Currently Amended) The method of claim ~~1~~ further 1 further comprising initializing a link.

Claim 4 (Original) The method of claim 1 further comprising training a receiver.

Claim 5 (Original) The method of claim 1 further comprising generating a profile of constellation size for at least one of the plurality of frequency domain data signals.

Claim 6 (Currently Amended) A method for improving the ~~signal to noise~~ signal-to-noise ratio in a multicarrier communication system, the method comprising:

obtaining channel attenuation and thermal noise level from a plurality of subcarriers;

determining the signal-to-noise ratio for each of the plurality of subcarriers based upon the channel attenuation and thermal noise level obtained from each of the plurality of subcarriers;

finding the cost of carrying one additional bit on each of the plurality of subcarriers based upon the determined signal-to-noise ratio;

receiving a plurality of data signals; and

time averaging the plurality of data signals received thereby lowering an effective noise variance of the subcarrier.

Claim 7 (Currently Amended) The method of claim ~~4~~ 6 further comprising compensating for channel distortion using a per-tone frequency domain equalizer.

Claim 8 (Currently Amended) The method of claim ~~4~~ 6 further comprising initializing a link.

Claim 9 (Currently Amended) The method of claim ~~4~~ 6 further comprising training a receiver.

Claim 10 (Currently Amended) The method of claim ~~4~~ 6 further comprising generating a profile of constellation size for at least one of the plurality of frequency domain data signals.